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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO.   |
|---|-------------|----------------------|---------------------|--------------------|
| 10/698,200  | 10/31/2003  | Chikafumi Yokoyama   | 58429US002          | 9988               |
| 32692   | 7590        | 11/30/2006           | EXAMINER            |                    |
| 3M INNOVATIVE PROPERTIES COMPANY<br>PO BOX 33427<br>ST. PAUL, MN 55133-3427 |             |                      |                     | WILLIAMS, JOSEPH L |
| ART UNIT  |             | PAPER NUMBER         |                     |                    |
|   |             | 2879                 |                     |                    |

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/698,200             | YOKOYAMA ET AL.     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Joseph L. Williams     | 2879                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11 September 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 11-15 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 4-10 is/are rejected.
- 7) Claim(s) 2 and 3 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 11-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11 September 2006.
2. Applicant's election without traverse of claims 1-10 in the reply filed on 11 September 2006 is acknowledged.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 4-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Yokoyama et al. (US 2005/0253290).

The applied reference has a common Inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Yokoyama ('290) teaches throughout the reference a method of forming microstructures on a substrate, the method comprising: disposing a curable material (2) on a substrate (1), wherein the curable material comprises a viscosity of less than 12,000 cps (paragraph 0017); contacting the curable material with a flexible mold (10) starting at a first end of the substrate and proceeding at a substantially uniform contact speed in a first direction and applying a substantially uniform contact pressure; forming the curable material, using the mold, into a lattice pattern, wherein the lattice pattern comprises a first set of ribs aligned in the first direction and a second set of ribs aligned in a second direction substantially orthogonal to the first direction, wherein the first set of ribs comprises a pitch of less than 500 microns (table 1); curing the curable material; and removing the mold.

Regarding claim 4, Yokoyama ('290) teaches the pitch of the first set of ribs is less than 300 microns (table 1).

Regarding claim 5, Yokoyama ('290) teaches the ratio of the average width of each rib of the second set of ribs and the average width of each rib of the first set of ribs is at least 1.5 (table 1).

Regarding claim 6, Yokoyama ('290) teaches a plurality of ribs of the first set of ribs are connected by intervening land regions, and further wherein the intervening land regions comprise a substantially uniform center thickness (figure 2).

Regarding claim 7, Yokoyama ('290) teaches a plurality of ribs of the second set of ribs are connected by intervening land regions, and further wherein the intervening land regions comprise a substantially uniform center thickness.

Regarding claim 8, Yokoyama ('290) teaches the curable material comprises a ceramic material (paragraph 0057).

Regarding claim 9, Yokoyama ('290) teaches the curable material comprises unrolling the flexible mold while contacting the curable material starting at the first end of the substrate (figures 3A-3C).

Regarding claim 10, Yokoyama ('290) teaches removing the flexible mold comprises rolling the flexible mold onto a receiving element (figure 4E).

#### ***Allowable Subject Matter***

5. Claims 2-3 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 2, the prior art of record neither shows nor suggest firing the curable material after removing the mold.

Due to its dependency, claim 3 would necessarily be allowable.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Williams whose telephone number is (571) 272-2465. The examiner can normally be reached on M-F (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Joseph L. Williams  
Primary Examiner  
Art Unit 2879